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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,831	12/03/2004	Stuart Hepworth	GJ-259J	7330

7590 06/02/2006  
Iandiorio & Teska  
260 Bear Hill Road  
Waltham, MA 02451-1018

EXAMINER
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LEUNG, PHILIP H

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/516,831

Applicant(s)

HEPWORTH ET AL.

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In claim3, “according claim 1” at line 1 should read “according to claim 1”. Correction is suggested.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 7-14 are rejected under 35 U.S.C. 103(a) as being obvious over Nissan Motor (JP 3-189216) (previously cited by the applicant), in view of Petersen (US 2003/0034340) or Sumitomo Rubber Ind Ltd (hereinafter, Sumitomo) (both newly cited).

Nissan Motor shows an apparatus and method for warming a an inflated tyre on a wheel to a temperature required for vehicle racing comprising the tyre on the wheel , generator means (10, 32) for generating electromagnetic energy of a frequency that heats the tyre, temperature indicator means (41) for indicating the temperature of the tyre, and control means (43) for controlling the operation of the apparatus (see Figures 1-7 and the English abstract). It is clear from the drawings that the tyre is on the wheel of a car as shown in Figure 3 and in view of the statement “it can improve the running performance earlier after a vehicle starts to travel” in the abstract attached at the end of the Office action. A translation of the whole document will be requested. Therefore, Nissan Motor shows every feature except for a container for enclosing the

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tyre being heated. Petersen shows a tyre heating device having a heating element 3, thermostat 4 and a container 6 for enclosing inflated tyres for heating the same before the start of a race (see Figure 1 and paragraphs [0010] – [0031]). Sumimoto teaches that it is well known in the art to use a container 3 for heating tyres TH(T) with high frequency electromagnetic generator 4 to contain the radiation (see Figure 2 and the English abstract). It would have been obvious to an ordinary skill in the art at the time of invention to modify Nissan Motor to use a container for enclosing the tyres being heated for a portable unit, in view of the teaching of Petersen and for a safe system in view of the teaching of Sumimoto. In regard to claims 9, 11-13, Nissan Motor shows vertically mounted wheel (claim 9); the use of radio frequency as the electromagnetic energy (claim 11); metal conductors 14 as an active part (claim 12) and the device is portable (claim 13).

4. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissan Motor (JP 3-189216) (previously cited by the applicant), in view of Petersen (US 2003/0034340) or Sumitomo Rubber Ind Ltd, as applied to claims 1-3 and 7-14 above, and further in view of Searle et al (US 3,566,066) (previously cited by the applicant).

As set forth above, Nissan Motor combined with Petersen or Sumimoto shows every feature as claimed except for the explicit showing of the door structure. Although not shown explicitly, a door must obviously be provided in the container in order to load and discharge of the tyre and to shield the microwave energy from escaping from the chamber. Anyway, Searle shows a microwave heating chamber 1 with a lid 2 for heating a tyre on a rotating support 4 and a door operating assembly 3 for quick opening of the door (see Figure 1 and col. 2, lines 18-40).

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It would have been further obvious to an ordinary skill in the art at the time of invention to modify Nissan Motor combined with Petersen or Sumimoto to provide a door with a quick opening device so that the tyre can be easily loaded and unload from the chamber, in view of the teaching of Searle. In regard to claim 6, Searle shows that the chamber 1 is a cylindrical shape.

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Furthermore, it is submitted that Nissan Motor clearly teaches to warm an inflated tyre on a wheel of a car to a proper starting temperature. To use a container for enclosing the tyre and/or the electromagnetic energy would have been obvious to an ordinary artisan for the reasons set forth above.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

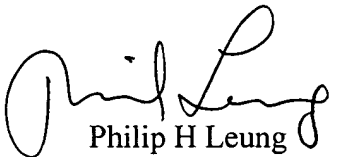
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
5-26- 2006